

PRENTICE
COMPUTER
CENTRE

UNIVERSITY OF QUEENSLAND

ST. LUCIA

QUEENSLAND

AUSTRALIA 4067



NEWSLETTER

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N-244

10-Oct-79

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1.0 Disk Quotas - Help Wanted

Unfortunately, we are fast running out of disk space on the PDP1090 system (KL). This was predictable and the purchase of an additional disk drive is included in our equipment programme for this year. Unfortunately, DEC have had some difficulties in supply. The new RP07 disk drive was announced by DEC and then withdrawn and this has placed longer lead times on the delivery of RP06 disk drives. We are doing all we can to expedite delivery but doubt whether an additional drive will be available before Christmas.

On the other hand, the problem could be relieved substantially if users made use of the File Migration System. This system has recently been revised to reduce overheads and costs to users and to provide a maximum turnaround of 2 hours for retrievals. The features of the FMS System were included in Newsletter N-237 but are repeated in this newsletter in a subsequent section.

The system was designed not only to reduce the cost and improve the response but also not to be overbearing in terms of purges and deletions of files. It was hoped that, because the cost of using archive would be much lower and the response better, users would voluntarily move their files from the online area rather than pay file storage charges but it would appear that the current cost of online storage is not a particular constraint. It was also proposed to apply the offline charge (which had been temporarily suspended due to problems with old FMS) to discourage users from archiving files. In current circumstances, we did not feel it was appropriate to add additional cost burdens.

If we reduce the disk quotas from 1500 blocks to 1000 or 800 blocks, this impacts mainly on a few serious users and, in any case, they could get around this as in the past by opening new ppns. I am very reluctant to re-introduce purging and automatic deletion of rubbish files. I would much rather leave such actions to the users with a better knowledge of their own requirements. Nevertheless, it is not in the interests of the University community that increasing capital expenditures are made to support the maintenance on the online area of rubbish files or files not frequently used. Nor should speed of response in retrieving files from the offline to the online area be increased because some users have archived unwanted files rather than deleting them.

I ask all users please to help to provide a better service by -

- (a) Deleting all unwanted files (e.g. .BAK, .TMP, .LOG, .LST, .LPT, .PLT, .DIR not accessed for a period) from the online and offline areas; and
- (b) Archive files not wanted immediately from the online area to the offline area. Except for unusual circumstances, we will guarantee that the normal time for retrieval will be no greater than 2 hours.

I hope this call for voluntary control of the disk area is successful. The FMS system does provide you with the facilities to do it. Otherwise (and although it is not our preference) we will have no alternative but to reintroduce the purging of files not accessed for a period. We cannot give any guarantee how long it will take to retrieve such purged files as with current resource constraints priority cannot be given to such a service.

Alan W. Coulter
Director
extension 2189

2.0 File Migration System

The File Migration System provides facilities to allow users to store files in an offline disk archive and to retrieve them at a later date. Such a system is necessary because there is rarely enough room on the online public disk areas to allow users to contain all their files at any one time.

Users were informed in March this year that a new FMS system would be installed during April. This was done and the system has been running well since then. It is inexpensive and efficient. It has none of the deficiencies which users may remember from the old FMS system.

The FMS is easy to use, there are five simple commands:-

.ARCHIVE	a file(s) to the archive
.RETRIEVE	a file(s) from the archive
.ODELETE	a file(s) from the archive
.ORENAME	a file(s) in the archive
.ODIRECTORY	obtain a list of files in offline area

You may use abbreviations. For example:

.ARC ABC.FOR

will move the file ABC.FOR immediately from your area.

There are in addition a variety of switches to modify these commands. For example:

.ARC ABC.FOR/PRESERVE

will move a copy of the file ABC.FOR to the archive but will leave the original ABC on your online area.

A comprehensive description of all commands and switches is available in the file DOC:FMSCOM.DOC. It is about eight pages long and may be obtained by the command

.PRINT DOC:FMSCOM.DOC

ARCHIVE commands cause files to disappear immediately from the online area; if a /PRESERVE switch is used the response to the command is only as long as it takes to copy the file(s) being ARCHIVE'd. RETRIEVE commands on the other hand cause an immediate entry to be placed in a queue of requests and the file(s) will be restored to the online area usually within two hours.

The costs of using the FMS are insignificant; for all commands the costs should not exceed one or two cents per file and there is no offline storage charge. Online disk space is very tight at the moment as is pointed out in an accompanying article so please use the FMS to obviate the necessity for sterner measures.

If you have any problems or queries, please ring me on extension 3016.

John Barker

3.0 National Computer Art Contest

The Australian Computer Society is organizing a National Computer Art Contest following the success of the N.S.W. Computer Art Contest of the past two years.

Computer art can take many forms, from the conventional art drawn by a graph plotter or a printer to animated art on a video screen. The 1978 N.S.W. Computer Art Prize was won by students from the N.S.W. University who produced a film of animated pictures originally displayed on a video screen.

The National Computer Art Prize 1979 is planned to be the first of an annual event and a prize of \$300 will be presented to the winner.

Entries must be lodged with the A.C.S. Chief Executive, 1st Floor, Spectrum Building, 220 Pacific Highway, Crows Nest, N.S.W. 2065 by December 1, 1979 and any media may be used providing a computer plays an important part in the creation of the entry.

A statement must be included with the entry specifying how the computer contributed. The judging panel, however, will select the winner purely on artistic merit and the computer technique will not be considered.

For further information, please contact Derrick Davey (02) 929-8688.

4.0 New Facility in Macro Assembler

A version of the PDP-10 Macro is now available on NEW: which has the facility of producing a table of contents (generated from the SUBTTL's in the source file) at the beginning of the listing. The facility is invoked by the use of the TOCON\$ pseudo-op before the first SUBTTL to be included in the table. The facility may be turned off by the use of the TOCOF\$ pseudo-op before a SUBTTL which is not required in the table, and re-instated by another TOCON\$.

Since these are non-standard pseudo-ops, their recommended usage is

```
IFDEF TOCON$, TOCON$
```

or

```
IFDEF TOCOF$, TOCOF$
```

so that assembly will not fail if a standard version of the assembler is used.

Mark Robbie
extension 3941

5.0 Fortran Flowcharter and Re-formater

A program to make flowcharts of and perform various re-formatting functions on FORTRAN source code is now available on the UTI: directory. The re-formatting functions include:-

1. Renumber the statement labels,
2. Generate sequence numbers,
3. Move FORMAT statements to the end of the program,
4. Convert 026 to 029 card codes.

The program can be invoked by the command
R UTI:FORFLO

a typical command string would be
MYPROG=MYPROG/X

which will produce MYPROG.LST which contains only a flowchart of the program.

For further information on the capabilities and running of FORFLO, see the file HLP:FORFLO.HLP

Mark Robbie

6.0 Statistics for 1978

In accordance with a resolution of the Computing Policy Committee, the following statistics are published for the information of users.

- (a) Proportions of Usage - Central Computing Resource (1977, 1978 and 1982 Targets).
- (b) Sources of Funds to the Prentice Computer Centre - University of Queensland 1978.
- (c) Departmental Expenditure on Central Computing as a percentage of their Total Maintenance Expenditure of 1978.

PROPORTIONS OF USAGE - CENTRAL COMPUTING RESOURCE

	1977 %	1978 %	Requirement 1982 (i) %
University of Queensland			
Teaching & Research	29	31	50
Student Club	3	3	2
Administration (ii)	44	40	26
Academic Support	2	3	2
Affiliated (iii)	5	7	3
Griffith University (iv)	4	6	11
Other	13	10	6
	<hr/> 100 <hr/>	<hr/> 100 <hr/>	<hr/> 100 <hr/>

- Notes (i) The 1982 requirement has been set as a target by the Computing Policy Committee and is supported by the Professorial Board. It assumes that capital funds will be provided in 1980-81 to allow the KL to be developed (particularly in disk storage, communications and core) to twice its existing utilization; that pricing*, funding or other strategies will allow growth in the teaching and research area at 40% per annum.
- (ii) Assumes an estimated growth of 30% in administrative work in the period 1979-82.
- (iii) Mainly Queensland Tertiary Admissions.
- (iv) Capital contributions by Griffith University would entitle that University to usage of 11% of the resource.

Director's Comments

* Consistent with the Computing Policy Committee's resolutions, base prices were reduced in 1978 and 1979 and new low cost services for Sunday operation and SLOTS were introduced in 1979. Special computing grants for innovative teaching and research applications were introduced in 1978 and significantly increased in 1979. A small grant of computer time was also made to each teaching and research department in 1979 for trial and practice purposes. There is some lag by users in adjustments to new prices and facilities. Bearing in mind that administrative demands are relatively inelastic as compared with Teaching and Research, it is expected that the trend in proportional usage will be in the direction of the Computing Policy Committee's objectives. Nevertheless, some increase of funds into computing will be necessary if the 1982 objective is to be achieved.

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SOURCES OF FUNDS FROM UNIVERSITY OF QUEENSLAND 1978

	\$000's	\$000's
TEACHING & RESEARCH		
Maintenance	88	
U.R.G.	53	
Postgraduate Training	43	
Research Grants & Scholarships	22	
Other	16	222
	—	
ADMINISTRATION		
Maintenance	270	270
	—	
ACADEMIC SUPPORT		
Maintenance	15	
Other	3	18
	—	—
TOTAL		510
		—

Departmental Expenditure on Central Computing from University Research Grants
as a Percentage of Total Expenditure from Such Grants during 1978

0%	less than 1%	less than 3%	less than 5%	less than 10%	less than 15%	less than 20%	less than 30%	less than 40%	less than 60%
Botany	Dentistry	Chem. Eng.	Anatomy	Architecture	Child Health	Agriculture	Anthropology	Computer Sc.	Surveying
French German Journalism	English Entomology Government	Mining & Met. Microbiology Physiology & Pharmacology	Biochem. Pharmacy	Chemistry Classics Economics	Commerce Ext. Studies Geography	Civil Eng. HM Studies Mathematics	Education	Physics	
History Japanese Law Medicine Music Obs. & Gyn. Occ.Therapy Parasitology Pathology Philosophy Psychiatry Radiology Russian Social Work Speech & Hrg. Religion Surgery Vet. Anatomy Vet. Medicine Vet. P & PH Vet. Surgery	Physiother. R.T.P. S & P Med.	Animal Prod.		Elect. Eng. Mech. Eng. Geology Management	Psychology Zoology				

Departmental Expenditure on Central Computing
as a Percentage of Their Total Maintenance Expenditure during 1978

0%	less than 1%	less than 3%	less than 5%	less than 10%	less than 20%	less than 70%
Classics	Anatomy	Chemistry	Agric.	Anthropology	Commerce	Computer Science
English	Biochemistry	Education	Economics	Architecture	Civil Eng.	
French	Botany	Mining & Met.	Elect. Eng.	Child Health	S & P Med.	
German	Dentistry	Mathematics	HM Studies	Management		
Government	Chem. Eng.	Microbiology		Obs. & Gynae.		
Journalism	Mech. Eng.	Pharmacy		Psychology		
History	Entomology	Physics		Animal Prod.		
Japanese	Ext.Studies	Surveying				
Law	Geology	Zoology				
Music	Medicine	Geography				
Occ.Therapy	Physiology					
	& Pharmacology					
Parasitology	Psychiatry					
Pathology	Surgery					
Philosophy						
Physiotherapy						
Radiology						
R.T.P.						
Russian						
Social Work						
Speech & Hrg.						
Religion						
Vet. Anatomy						
Vet. Medicine						
Vet. P & PH						
Vet. Surgery						